



Our Home, our Country, and our Brother Man.

## BRIGHT'S NEW METHOD OF GRAPE CULTURE.

There are many in Maine who are striving with commendable faith to cultivate the grape, and we have no doubt that they will ultimately obtain a variety with which they will succeed in ripening the fruit. There is no trouble in growing the vines; all we need, is a variety that shall ripen fruit early—and the experiments of horticulturists in different sections of the Union, in getting up new varieties of early seedlings, are encouraging. Hence we feel an interest in all experiments and new processes of grape culture that we meet with.

Mr. Bright of Philadelphia, has published, or is about publishing, a work on his method of grape culture, called the "Single Stem, Dwarf and Renewal System" of Vineyard Culture. We have not seen the work referred to, but some account of his system given us by a friend, and a communication from him in the *Horticulturalist* defending his priority in originating the system, gives us the main feature of it; and an account of this main feature, we think many of readers would take pleasure in reading, and, perhaps, practicing.

The first principle, after having suitably prepared the soil for the reception of the vines, is to plant them closely in rows—two feet apart is the distance named by Mr. Bright. The design of this is to keep the vines dwarfed, and renew the bearing rods often, in a manner which we shall illustrate as follows:—We will suppose that you have this year (1860) set out your rows of grape vines two feet apart in the rows, and that they have thrown up a single rod, or cane, from three to six feet in length, which you have trained to a stake. In the fall you are to cut down every other one to two or three eyes, and protect all of them during the winter in the usual manner. In the spring of 1861 you will begin to fruit them, and your row will stand as in this diagram—the canes left last year bearing fruit, and the eyes of the cut canes throwing up new ones—(Fr., fruiting—Gr., growing):

Fr.	Gr.	Fr.	Gr.	Fr.	Gr.	Fr.	Gr.
0	0	0	0	0	0	0	0
1	2	3	4	5	6	7	8

In the fall of 1861, after gathering your grapes, those canes that have borne fruit are cut down to two or three eyes and the new canes of 1861 suffered to remain for next year's fruiting, so that in 1862 your row may be represented thus:

Fr.	Gr.	Fr.	Gr.	Fr.	Gr.	Fr.	Gr.
0	0	0	0	0	0	0	0
1	2	3	4	5	6	7	8

This is a very simple method, and, according to Mr. B.'s statement, very successful. Mr. Bright, in the communication referred to, thus briefly details his method and its merits:

"I propose to cultivate native grapes with as much care and precision as we do foreign kinds, and to produce large crops of perfect grapes and large bunches free from rot or mildew.

In the first place, I require that the vine shall be planted shallow, in soil not over-rich, and the roots kept near the surface by mulching and top-dressing. Next, I demand, as a requisite to success, that the cane shall be grown as a dwarf, not over three to six feet long, and kept constantly concentrated within that limit by summer pinching, and that the laterals shall be stopped at least four times during the season. No wood of any consequence must be grown to be cut away at the fall pruning. If the vine be weakened the leader must be stopped [pinched off] several times.

When the cane is fruiting, only one branch must ever be left on each shoot, and the shoots must be stopped, as soon as the fruit is set, at two points beyond the bunch, and the stopping process must be continued on the shoots and laterals, leaving one new leaf on each new joint each time of stopping until the stoning commences. Nor must the shoots or laterals be allowed to extend to three or four joints, either while growing the canes or when fruiting, before this stopping is performed.

My idea is to cultivate the native as carefully as we are compelled to do with the foreign vines in a pot, and if this is done, I am sure the result will be in the highest degree satisfactory. If the best possible table grapes be desired, I would advise thinning the bunches, as we do in the grape; and I would also limit the length of the cane to three feet or less. After fruiting, then cut down the entire cane, leaving only two or three eyes on the last year's wood, and take a whole year to produce a new cane before fruiting again."

Again he says, "I do not prune or use the knife upon my dwarfs during the process of growth, except to cut down the entire vine every second year. I pinch in the leader, the shoots and the laterals, while yet tender, and only direct the force of the eye in new directions, gently, so as not to give a violent check to the cane at any time. I know very well that the vine will not endure the severe pruning of large branches, or even of strong shoots and laterals without injury. I avoid this evil by not permitting unnecessary wood to grow at all. Hence I do not prune severely. My practice is based upon stopping, not pruning."

The method recommended above, has succeeded well under Mr. Bright's management, according to the testimony given by himself and others. It looks reasonable, and is simple and easily practiced. We hope those horticulturists in Maine who are experimenting with the grape, will try it, and we have little doubt of their being successful.

## NO MANGE IN BLACK HOGS.

A writer in the *Southern Planter*, describing the different varieties of swine, says that he never knew black hogs to have the mange, while white ones are very subject to it and sometimes die of it.

## DWARF APPLE TREES.

When acorns of the common apple are engrafted on what are called Paradise stocks, the trees become dwarfed in growth. They thus form, when in a bearing state, very pretty objects in the garden, and they oftentimes bear more apples in proportion to their size than common trees of the same variety do. As they are small, they cannot of course produce a large amount of crop, and are merely garden ornaments, combining both beauty and utility in a small compass.

We are glad to see that a successful experiment has been made by H. A. Bazel of North Carolina, by using, instead of the Paradise stock for engrafting on, what he calls the "choke berry," which is probably what we in Maine call the "swamp pear" or "shad bush," and sometimes the "planting bush" (*aronia* of the Botanists). This has been used among us as a stock on which to engraft the pear.

In a communication to the *Horticulturalist*, in speaking of the remarks of a writer who was describing the skill of the Chinese in fruit culture, Mr. B. says:—"It was asserted by the writer that he had seen perfect trees, with fruit on them, not more than two feet high. Now I will show a perfect apple tree, bearing a full crop, that is not more than two feet high, on land as rich as I can make it. This is accomplished by grafting the apple into the small shrub which we call here 'choke berry.' \* \* \* It does much better when the ground is moist, or to wet for apples, than when it is dry."

One of the most beautiful things I have ever seen, is a yellow Siberian crab apple worked into one of these, not more than two and a half feet high, just as full of fruit as it can be."

We would suggest, in addition to this, that the common thorn bush, which grows about our pastures, would make a good stock to engraft the apple upon for dwarfing. The pear will grow well upon it, and of course the apple will.

## STATE AGRICULTURAL EXHIBITIONS.

The following is a partial list of the State Agricultural Exhibitions to be held during the autumn of 1860. The remaining States will be added, from time to time, as we are informed of the date and location of their respective Shows:

Maine, at Portland, Sept. 25, 26, 27, 28.	Massachusetts, at Springfield, Sept. —
New Hampshire, at Manchester, Oct. 2, 3, 4.	Vermont, at Burlington, Sept. 11, 12, 13, 14.
New York, at Elmira, Oct. 2, 3, 4, 5.	New Jersey, at Elizabethtown, Sept. 4, 5, 6, 7.
Pennsylvania, at Wilkesbarre, Sept. 25, 26, 27, 28.	Illinois, at Jacksonville, Sept. 11, 12, 13, 14.
Indiana, at Indianapolis, Oct. 16, 17, 18, 19, 20.	Iowa, at Iowa City, Oct. 2, 3, 4.
Kentucky, at Bowling Green, Sept. 18, 19, 20, 21.	Georgia, at Atlanta, Oct. 23, 24, 25, 26.
Ohio, at Dayton, Sept. 25, 26, 27, 28.	Wisconsin, at Madison, Sept. 24, 25, 26, 27.
Nebraska, at Omaha, Sept. 19, 20, 21.	The United States Agricultural Exhibition will be held in Cincinnati from the 12th to the 20th of September. The premium list amounts to \$20,000. No cattle will be received, on account of pleuro pneumonia, but large premiums will be offered for horses, machinery, steam fire-engines, &c.

## DEAD CALF.

I have just lost a calf that has been fed, partly on cotton seed meal. He was sick but a few days—symptoms singular. A post-mortem examination proved it to be the overfeeding of the bile. As several calves have died this season that have been fed on this meal, the editor will much oblige an admirer of good stock by giving information on the subject. Truly yours,

J. W. GODDARD.

West Gardiner, 7th mo. 10th.

## NOTES.

We have, however, heard of such complaints in regard to feeding calves with cotton seed meal. We have, however, for two seasons past, fed both sucking and weaned calves with this sort of meal, and never had any trouble with them, on the contrary, it has always proved an excellent feed for them. We suspect that if the meal had anything to do with the death of the calves spoken of, it was given too liberally. It may be considered pretty concentrated food, and should not be given in quantities greater than the stomach can take care of easily. Ed.

## TANSY FOR BLOWING SANDS.

MR. EDITOR:—In my wanderings over that portion of Wayne called Buck Hill, I came upon a patch of tansy growing in one of those miniature deserts, it seemed to be flourishing, and had a strong hold upon the earth. The thought was suggested that tansy might be a good plant to grow in those sands. It would not, probably, add much to the forage, but those interested in the tansy trade can calculate the profits of the investment. In a defensive point of view it might be all important to prevent the overflow of the sand, and inundation of the farms and buildings.

## OBSERVATION.

Winthrop, July 14, 1860.

NOTE. In some parts of Wayne, near the Androscoggin river, are patches of sand so destitute of any clay or other adhesive matter that the wind blows them about, and they have, in some instances been blown upon and thereby cover better soil. Our correspondent proposes to remedy that flux by means of tansy. Would not a sprinkling of tansy grass with it be a good addition? A clay poltice would be a sovereign remedy. Ed.

## ROSE SLUGS.

A writer says:—"The slug, which is so partial to rose leaves, crawling round, snail-like, in his slimy path, is successfully destroyed by dusting with ashes, plaster, or anything that will absorb his slime, which seems to be his essential element. Perhaps many are not familiar with the slug, or may not understand its operations. I will just say, then, when you see the green substance upon the rose or other leaf eaten off, leaving nothing but the faded network or skeleton of the leaf, that is the work of the slug; and if you examine closely, you will likely find them on some neighboring leaves about, as it were, in their slime, being much of the color of the foliage they feed upon."

## WATERPROOF COATING FOR CLOTH.

Boiled linseed oil containing about an ounce of the oxyd of manganese, or litharge, to the quart, will make an excellent waterproof coating for cotton or linen cloth. Put on several coats with a brush, and allow each to dry perfectly.

## EXTRACT FROM AN ADDRESS DELIVERED BEFORE THE NORRIDGEWICK FARMER'S CLUB, BY S. L. BOARDMAN.

Of what advantage to the farmer is a knowledge of botany? He may think it is wholly useless, or, if of any importance, not of sufficient amount to warrant his giving any time to its study. Take a spear of grass, and what can he tell of its structure and formation, or to which class it belongs; and can he tell its several parts, the calyx from the corolla, or the stamens from the pistils? But to speak of the claims which the grasses demand upon your attention. Consider that they "embrace nearly a sixth part of the whole vegetable kingdom; they clothe the globe with perpetual verdure, or adorn it, at fixed seasons, with a thick matted carpet of green, none less beautiful for its simplicity; it nourishes and sustains, by far, the greater part of the animals that serve us and minister to our wants." When we consider the fact that throughout the middle and northern parts of the United States, it is necessary for us to feed our cattle at their stalls from four to six months out of the twelve, for our main dependence must be upon the grasses gathered from the fields the summer previous; "it is plain then, in an economical point of view, this subject is one of the most important that can engage the attention of our farmers." But look at the annual value of the grass crop to our country. For hay and pasturage together it is estimated at above three hundred millions of dollars; while, to our own State, the grass crop is more than double, in value, all the other field crops which we raise, embracing corn, wheat, rye, barley, oats, buckwheat, beans, peas, and potatoes—the estimated value of which is ten millions of dollars.

By the last census, (1850), the hay crop stood in value as the fourth of the agricultural products of our country, and but four other States produced more than Maine. Proceed a step farther. If but five per cent. of the value of the hay crop in this State is lost yearly by improper harvesting, cutting at a wrong time, or damaged by rains, the total amount would be five hundred thousand dollars. Are not these important facts, items which should be deemed worthy of close attention by each farmer of our State? One other thing which a proper botanical knowledge of the grasses would teach is, the amount of grass seed per acre, and the different varieties to be sown. From accurate experiments, made by men eminently qualified, it has been found that if several varieties of seeds are properly mixed they may be grown together upon the same ground, producing at one larger yield, of a better quality of hay; and it is well known that a mixture is always preferred by stock, to a single kind.

I am led to believe that the subject of entomology has not received so much attention from the people of this State as would be for our advantage. With the exception of the brief report of Dr. True of Bethel, on "Insects injurious to vegetation," inserted in Mr. Goodale's third volume upon our State agriculture, I know of nothing in the shape of reports or books from which any attempt can be made to obtain even an elementary knowledge of this highly important subject. Several years ago Prof. Harris, of Harvard University, prepared a very learned treatise upon the "Insects of New England injurious to vegetation," which is now, and will long be considered a standard authority. This work may have found its way into this State, but I have never seen it in possession of farmers, only in a few instances. For a number of years the New York State Agricultural Society have paid Dr. A. A. Fitch, (the most eminent entomologist in America), a salary of \$1000 per annum, to prosecute his studies in this department of the Natural Sciences, and his reports convey to the people a vast deal of information upon one of the most important branches of knowledge with which an agriculturist can become acquainted.

Upon this topic I fear there is too great an ignorance among our farmers. There is hardly a crop which we cultivate, or attempt to, which has not an enemy in the form of destructive insects; and each year the ravages of these insects among our crops is alarmingly on the increase, while our knowledge of them is no better than it was years ago. All farmers know that their plums drop from the trees, and they wonder the cause; but how many are acquainted with the curculio and its habits, together with the plans adopted to prevent its ravages? One will say that his orchard does not bear as well as in former years, and the reason he cannot account for. In Dr. Fitch's reports there are described ninety four insects which affect the trunk, leaves and fruit of the apple tree, and it may be our friend's orchard is infected by the borer without his knowing it. It is a fact, also, with which we are well acquainted, that wheat cannot be grown now as formerly, yet we are not well posted in regard to the wheat midge, theessian fly or chinch bug. People have likewise given up the growth of onions simply because the onion fly and maggot have become such enemies to its successful cultivation.

Some recent remarks furnished to the *Prairie Farmer*, founded upon the statistics of Illinois, in regard to the value of the orchard products in that State, may serve as an illustration of the topic which we are now surveying:—"The annual value of products from orchards in Illinois exceeds \$500,000, and if the injuries done to the orchards by destructive insects could be prevented, it would be one-fifth more." So these insects cost the fruit growers of that State \$100,000. This statement is accompanied by the following remarks:—"To write and study about and hunt bugs, by many, considered rather a small business, and often brings upon the individual who does it, not only ridicule and assumed contempt, but also persecution. But when the citizens of Illinois become convinced that, annually, they pay nearly one million dollars to feed the bugs, it will not appear so small a business."

Take entomology as another branch of the Natural Sciences to which the farmer should pay special attention, and what attractions it offers. Much is thus acquired by observation which cannot be obtained in any other way, and this knowledge is of the greatest importance. To notice the habits of our beneficial and injurious birds is certainly one of the most interesting and pleasing studies, a study to which the young should early give attention.

The birds which are of great service to the farmer, he often thinks as his enemies, and those which are busiest in destroying insects destructive to vegetation, he supposes to be engaged in making depredations upon vegetation itself. By careful estimates a distinguished ornithologist has found that crows and other birds to the number of 400 destroy caterpillars and other insects in the course of a year, to the amount of 25,459, 200,000! Shall the birds then be destroyed or the farmer remain ignorant of their uses and habits. You can have birds or you can have destructive insects; it depends, in a great measure, upon yourself as to the choice. If you prefer vermin and bugs on the trees and crops, the trees, branches, leaves, roots, and everywhere, then destroy the birds.

To refer to geology, mineralogy, meteorology and other branches, all of which are closely connected with agriculture, and the study of which would vastly benefit the farmer, would take up more time than is warrantable. But let me tell you to "turn back the leaves of the great book on which you tread and read in the rocks the history of long gone-by eras; trace the tree from embryo to perfection; observe clouds and winds, storm and sunshine, and find even these erratic visitors of the air subject to law; turn up the soil, and with a chemist's eye mark the changes of the mold under the influence of rain and manure; carry out these thoughts and see as you get used to mental labor, if the result is not felt all over, a lightness of heart and a sense of equality in whatever society you may be thrown. Awake then sluggard, and arise thou that sleepest."

Let me leave this part of my subject with a single remark. Suppose that a farmer knows the correct name of every plant, with its properties, that grows on his farm; the composition of its minerals and rocks, would not such knowledge add greatly to his happiness? Then he could work understandingly, and his daily walks in the fields would be enlivened by familiar acquaintances. Not a flower or plant or pebble, would escape his notice, indeed, there is nothing which tends more than the study of nature to increase the powers of observation. The naturalist sees beauties unseen by others; tastes and pleasures unfelt and unknown to others. "He sees wisdom in the trees, books in the running brooks, sermons in stones and good in everything." He does not become tired and disgusted with life, and find fault with the world and the order of Providence, but the more he studies the more he discovers wisdom, design and goodness in the arrangement of things, and a unity of design in that arrangement, proclaiming that its author is one and the same, possessing all knowledge and power.

NOTE. Since delivering the address, Feb. 7th, from which this extract is taken, I have made a brief examination of Secretary Goodale's fourth report upon our agricultural progress. As anticipated, a large part of it is devoted to the subject of "Grasses," than which, there is no more important one to the farmers of this State. It is not so complete as could be wished, but, nevertheless, is of great value. Flint's "Grasses and Forage Plants," is, without doubt, the best work upon this subject which can be obtained, and should be studied by all Maine farmers. The essay of Dr. True of Bethel, with reference to insects, made, and from which I have drawn for some illustrations, as also from Mr. Flint's work, is valuable for a report so brief, and written in a style so plain and familiar as to render it of great benefit to the large body of our husbandry not fully acquainted with entomology. It gives me pleasure to learn that a new edition of Dr. Harris's treatise on "Insects of New England," published by Messrs. Saxton & Barker, N. Y., would greatly aid the farmer in becoming acquainted with the branches upon which they treat.

## AMERICAN FRUITS FOR JAPAN.

We have already received some choice plants from Japan, and now that a treaty has been concluded between that strange nation and our own, and visits interchanged, we may hope for far greater and more beautiful additions. The interchange no doubt will be found of mutual advantage. D. M. Dewey, of Rochester, who is a publisher of three hundred varieties of colored plants, representing the leading fruits and flowers cultivated in this country, with his usual tact, conceived the idea of giving our recent Japanese visitors a glimpse of our horticultural productions. Knowing that at this season of the year, it was impossible to show them the fruits themselves, he prepared a set of his colored representations as a present, and believing that a personal presentation and explanation would be most desirable, he arranged, with a mutual friend in New York, to have them presented by the Rev. Mr. Stuart, Chaplain of the Niagara, on shipboard, when at sea. He will then be able to give a careful explanation of our modes of culture, &c., and thus amuse and interest the Embassy on their return voyage to Japan. The idea was a most happy one, and we believe may result creditably to our interest in this department.—*Rural New Yorker*.

## HORSE SHOING.

Latterly considerable interest is being manifested in the different papers devoted to part or wholly to the agricultural and stock interests of the country in horse shoeing. This we have always regarded as a most important matter to all who own or use horses, and it has seemed strange to us that so few shoers understand the nature of their calling. No horse that is badly shod can travel easily, safely or well, and many who use horses that cut their legs or trip, suppose that the fault is in the horse, while, in fact, no one is in fault but the shoer. There are hardly two horses that require precisely the same shaped shoe or that it be put on in precisely the same way; hence to shoe every horse so as not to pinch, and consequently injure the feet, and at the same time so that he can perform his work easily and well, requires considerable experience, and more than common skill and intelligence on the part of horse shoers.—*Am. Stock Journal*.

## WAYSIDE NOTES OF TRAVEL—NO. 30.

For the Maine Farmer.

LES, July 9, 1860.

My last "Note of Travel" was from Patten, June 15. Since that time I have made the tour of Aroostook, through No. 11, Presque Isle, Fort Fairfield, Houlton, Limestone, &c. This is the sixth time I have traveled through Aroostook, and it improves wonderfully on each repeated visit. Roads, farms, villages, buildings, all improve; and the land and natural advantages, the scenery and beauties of forest and field, become more and more charming and inviting, every time they are seen. The snow was gone earlier than usual this spring; a long period of dry weather afforded an opportunity for clearing a large amount of new land, and there were never so large fields of grain and other crops growing as now; and never did every growing crop appear more promising. Frequent showers in every part of the county since the first of June, and the unusual warm weather, has clothed the whole face of the earth with the deepest green, indicating a most luxuriant growth of every description of crops.

At Masardis we come to the Aroostook river, thirty-six miles north of Patten. This town has been settled but about twenty-two years. One of the first settlers was Joseph Pollard, Esq., who came here before there was made for more than twenty miles below. He brought his first supplies by water, up the Penobscot, thence up the East Branch, carried over to some of the upper waters of the Aroostook, and thence down to this place. He has now a farm, having 200 acres cleared; cuts annually, on an average, 100 tons of hay; sowed this year 163 bushels of grain, including 12 bushels of wheat. His usual crop of wheat is from 20 to 30 bushels to the acre; sometimes he has raised 40 bushels. Fifty bushels of oats to the acre is a middling crop; sometimes the crop is much larger.

Mr. Pollard's grounds around his buildings, are covered with fruit trees and shrubs. He has a large number of the common apple trees, some of which do not seem to flourish whilst others bear well; also crab apple trees—two varieties, which are as hardy as the hemlock and spruce, bear abundantly and never fail. He has three kinds of cherries; currants, six varieties; gooseberries, five varieties; three varieties of the strawberry; two kinds of grapes; and four varieties of the plum, including the Canada plum, which is a native of the banks of the St. John. The bottom, or almost tree adorns his grounds, as well as many ornamental trees and shrubs. Mr. Pollard says that currants, gooseberries, crab apples, and cherries, do better here than any where else that he has ever been acquainted. It is a treat to walk over his garden and fields, and see the almost endless variety of useful and ornamental plants which flourish at the bidding of a man of rural taste, who, in less than a quarter of a century, has converted an immense wilderness into a fruitful field.

Further along—the Aroostook towards No. 11, some four miles—lives my friend Ben Franklin, another of nature's noblemen, who knows how to make out of the dust of the earth food for man and beast. The most of his farm is intervals, which is annually overflooded, sometimes six feet deep. Upon a portion of this he has raised oats for nine years in succession, without any diminution of the amount of the crop. He has this year 46 acres in grain, 2 acres of potatoes, besides other crops. Last year he raised 1230 bushels of oats by measure, which he sold at 30 lbs. to the bushel, and they weighed 1400 bushels. He had last year, 1490 bushels of grain in all, by measure. He cuts annually 40 tons of hay. This farm has been carved out of the wilderness within the last eight or ten years, and there may be a thousand more just such ones made upon the banks of the Aroostook.

Friend Traflet remarked that, in addition to all his other crops, he had just harvested a boy, weighing ten and a half pounds, which he should not think of selling for one hundred dollars per pound. May his sons be as plants grown up in their youth, and his daughters as corner-stones polished after the similitude of the palace.

Presque Isle is a giant in embryo—an "irrepressible" youth, which neither fire can consume nor floods drown. Seven years ago it was a mere hamlet, having a backwoods tavern, a few inferior dwellings, and a small store. It has now, I know not how many elegant dwellings, a splendid hotel (at which are one hundred arrivals weekly), stores filled with goods and crowded with buyers, two weekly newspapers, and machine shops filled with artisans and their customers. A few weeks ago, eighteen buildings, including the Academy, were a prey to the flames. From the ashes have already arisen, or building, as many, and much better buildings than were burnt. The Academy is to be immediately rebuilt; a Meeting-house is to be built, and by September no stranger would dream that a fire ever visited this village. In addition to all this, the citizens of this town and vicinity have raised by subscription \$3500, which, with \$5000 appropriated by the State, is to be expended this summer in building a bridge over the Aroostook. Presque Isle is bound to flourish.

There is but one annoyance in Aroostook, and that is the rum taverns. The grand old forest, the green fields, the waving grain and golden harvests, the silvery streams and lofty Katahdin, are all beautiful to behold; and the open-hearted hospitality and sociability of the people, charming to enjoy; but these rum places, where strangers are compelled sometimes to abide, are such plague-spots which prove that there is no rose without its thorn. Whether it is travelers like myself who go there, or the people who dwell there, that have sins which Providence is determined to punish by suffering these grog-shops to exist, I shall not attempt to decide. But of one thing I am certain, they would not be permitted to remain were it not for the sins of somebody. There are a great many, however, repenting of the sin which supports them, and I hope that the day will all "go out like a candle." One has already thus gone out. Smith & Wing, who keep the deservedly popular house at Mattawamkeag, have advertised that hereafter their house will be conducted on "Temperance Principles." Mr. Hiram Gould, of the "Monticello House," also has a free zone of rum. Flourishing divisions of the Sons exist at Fort Fairfield, Presque

Isle, Monticello, Houlton, Limestone, Hodgdon, and perhaps in other places. Backwoods Division, at Presque Isle, had their hall, furniture, regalia, and records burned; but the calamity only increased their efficiency and usefulness. Their losses are all repaired, except the hall, and they are soon to have another, better than the former.

The emigration to Aroostook neither slumbers nor sleeps. There is as much, or more, this year than ever before. I should think I met more than fifty emigrants, in two days, between Houlton and Lincoln. The woods everywhere are full of people, looking for land or felling trees. The census returns will disclose a population in Aroostook larger than any are prepared to expect.

## EXHAUSTING CROPS.

How frequently we see this term used. Let the farmer remember that the whole earth, from the surface to the centre, is made up of the raw materials of which plants may be formed, and that a change of condition, such as always will occur by atmospheric influences, brought about by under-draining and sub-soil plowing, must free from their prison houses the particles of soil, all the inorganic constituents of plants, and that by progression these become proper pabulum; that in the absence of such progression, fertilizers may be used containing all the requirements of plants in a progressed condition. Let him remember that the question should not be "how little manure will raise a crop?" but rather "how much may be used with increased profit?" and rest assured he will discover no exhausting crops.

It is true that the judicious agriculturist will change the style of his crop so that the excreta of a farmer, may be used as food for a current crop; but unless he repeats plants of a similar kind too often in the same locality, he need not remember that every constituent of the soil is more valuable in crop form than when latent in the earth; and to know that the true rest of the soil is a proper succession of crops. If he desire to raise the same crops in the same place a number of times, he should know that he must add to the soil in a progressed condition such ingredients as that special crop most requires. Thus if the crop require potash, let him add unleached wood ashes, and find it an exhaustless crop if he can. The more fact that his soil contains the debris of feldspar, which the chemist will inform him has seventeen per cent of potash, is no proof that the soil can bear potash plants, for although all potash originally came from feldspar, still in that condition it is not fit food to be assimilated by plant-life. Bunker Hill monument contains feldspar in large quantities; who would think of raising a cabbage on top of it? And the theorist who supposes that grinding it to a powder would cause it to fertilize a cabbage, is mistaken; he requires that mother nature should have raised lichens and mosses, and have first taken up this potash and then re-deposited it in the soil, carrying it in turn through the various changes of the lower order of agricultural products, before the potash is capable of sustaining a higher order of plants. He might as well go to the mountain side and try to sustain his life by swallowing the powdered rocks, and still in man he can find by analysis no constituent that did not originally arise from the rocks.

Let the farmer be more practical, then he will find chastened science useful to him. Let him learn that when his crop requires potash he must take it from other crops of less value. Thus the ashes of the oak tree can fertilize the cauliflower, while the feldspar cannot; the bone of the animal will supply the phosphate while phosphatic rock will not, and its more immediate value may be increased by such treatment as will render the phosphate of the bone soluble and divisible, and therefore suited to sustain plant-life. We have yet to see a soil at all exhausted, which has received a fair dose of bones decomposed by sulphuric acid, mixed with the dried blood of animals.—*Working Farmer*.

## WORKING CATTLE VS. HORSES.

The patience, meekness, and uncomplaining toil of the working ox ought, although it does not always, to endear him to his master, and ensure for him kind usage and protection. The writer has a very vivid recollection of the successive yokes of oxen, which, during the years of his childhood (up the valley of the Genesee,) were owned and worked by his father. The country at that time was comparatively new and much of it of course covered with a dense growth of wood and timber. These cattle had about as distinct and marked features and character as different men; but all of them were similar in one thing, and that was, doing to the best of their ability the labor required of them. Amid logs and stumps, on side hills and in swamps, over rough roads and through bridgless streams, we have seen them plod, where horses could not, or would not go. Some of their drivers were kind, others harsh and cruel. One in particular is remembered, who was eternally wielding the whip, and seemed never to be happy unless belaboring his team. He was a good teamster in some respects, and took good care of his cattle, but this defect in his management spoiled all.

Working oxen, although far more patient and enduring under ill treatment than the horse, yet are themselves susceptible to the influences of kindness, and respond quite as readily to the encouraging efforts of the driver, as to the lash. One yoke of beautiful red cattle was now recollecting, which scarcely knew what it was to be beaten, and were so well trained as to be driven side by side around a field, hawed and goed, and backed, without so much as a tow string to confine them together. These cattle were subsequently sold at auction, in order to settle an estate, and their admirable training run them up full twenty-five dollars above the market price.

Oxen are much better in many respects for working than horses; some of which advantages may be summed up as follows: They cost much less in the first instance, and are therefore more within the reach of men of moderate means. They are less liable to disease, and if an accident occurs which disables them from labor, they may be converted into food. If a horse should happen to break a leg, a bullet might as well be put through his head at once, for he is worthless either after; but if the same accident occurs to an ox, he can be converted immediately into beef, pro-

vided he is sufficiently in flesh; or if this is not the case, the wound can generally be so far cared as to enable the animal afterwards to fatten.

The ox will eat less food and of a coarser kind than the horse, and needs less attention in order to thrive. He will work in localities impossible for the horse, and go forward patiently with labors which would chafe the other into utter intractability.

No man who has ever witnessed the two kinds of animals at work around a saw-mill yard, for instance, can fail to have been struck with this difference in their character. Hitch a span of horses to a log which is too heavy for them to start at once, and in nine cases out of ten after one or two efforts they will either break their harness, splinter a whiffletree, or balk, and refuse to draw at all. Now try it with a yoke of well broken oxen, and they will lay out their utmost strength with the same gentleness and good will for the twentieth time, as they did the first.

There are a great variety of duties to be performed upon the farm, where horses are of superior advantage; and there are others in which working oxen are altogether preferable. Where the business is sufficient for the employment of both, it is advantageous to combine them; but where a farmer can own but a single team, especially in a new country, oxen are usually much the best.

In this fast age, working oxen are too much ignored by our farmers, and their value as laborious and willing servants is too much overlooked.—*Wool Gravel and Stock Register*.

## TREATMENT OF YOUNG MARES.

Willoughby Wood, a writer on horses much esteemed, thus gives his opinion in the *London Field* on the question as to whether young mares are injured for fast work by having colts at an early age:

I have no doubt that the powers of a mare are seriously impaired for fast work after she has had a foal. It may not stop her growth, because a filly which has been well kept up to three years old, does not usually grow much after that period. It may not greatly detract from her appearance, although it must tend, in a certain degree, to increase that very usual defect of mares, the disproportionate weight of their carcasses compared with the power of their legs. But the very fact is itself a strong presumption against the expediency of the practice. I imagine that those breeders who resort to it do so either from mistaken views of economy, or only apply it to such mares as they propose to retain for moderate work about home. Without entering at length into the physiology of the subject, it appears to me that one consideration suffices to condemn the practice. The whole art of training a horse for a race, or preparing him for the hunting field or other fast work, consists in bracing his muscular system, and discarding from the frame all superfluous matter. In the breeding animal the very reverse of this is required; our preparation must then be made for that total relaxation of the system which is requisite for the birth of the young animal. When it is considered, moreover, that this state of relaxation is continued for six months longer, or until the foal is











